BOXER G2 & R9

Installation Instructions

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Antenna Versions

The Boxer case antenna comes in multiple versions with the features listed below.

Boxer G2 & R9
• 2x RJ-45 Ports • USB-C Charger • Battery Operated – OmniCharge 30C+ **Custom** Battery, OP3CPA01 (battery not included) • 40mm Fan

Required Tools & Accessories

The following tool (not provided) is required for the installation of the Boxer case antenna:

- Philips Screwdriver

The table below lists the required accessories for the Boxer antenna.

	Boxer G2	Boxer R9
Provided with Antenna	• PTA0071 Round Head Screws, 4 pcs • PTA0099 Round Head Screws, 8 pcs • PTA0399-TL Pan Head Screws, 10 pcs • Ethernet Cords, 2 pcs * • USB-C to Barrel Adapter • Battery Tray for Omnicharge 30C+ Battery Pack • PTA0479 Power to Barrel Adapter • Cable Ties	• PTA0071 Round Head Screws, 4 pcs • PTA0099 Round Head Screws, 8 pcs • PTA0399-TL Pan Head Screws, 6 pcs • PTA0393 Pan Head Screws, 4 pcs • PTA1121 Pan Head Screws, 4 pcs • Ethernet Cords, 2 pcs * • USB-C to Barrel Adapter • Battery Tray for Omnicharge 30C+ Battery Pack • PTA0479 Power to Barrel Adapter • Cable Ties
To Be Purchased By Customer	**Router Options:** • Ericsson S700 • Peplink MAX BR1 Pro 5G • Peplink MAX BR1 Mini 5G • Semtech XR60 • PTA1181 Omnicharge 30C+ **Custom** Battery Pack (OP3CPA01) • 65W GaN Charger for OmniCharge Battery • Ethernet Cords, 2 pcs **	**Router Options:** • Ericsson R920 • Ericsson R980 • PTA1181 Omnicharge 30C+ **Custom** Battery Pack (OP3CPA01) • 65W GaN Charger for OmniCharge Battery • Ethernet Cords, 2 pcs **

* For connecting the router to the ports on the case

** Optional, for connecting external devices to the case, length as required by customer

Battery Installation-Boxer G2 & R9

Step 1: Mount the Omnicharge 30C+ battery pack to the battery tray.

A. Remove the cover plate from the enclosure.
B. Insert the battery pack into the battery tray, as shown in Figure 1. Ensure that the battery pack ports are at the open end of the battery tray, as shown below.
C. Place the cover plate onto the battery tray and fasten with the six PTA0399-TL Pan Head screws provided in the kit, as shown in Figure 2.

Figure 1: Place the Omnicharge 30C+ battery pack into the battery tray.

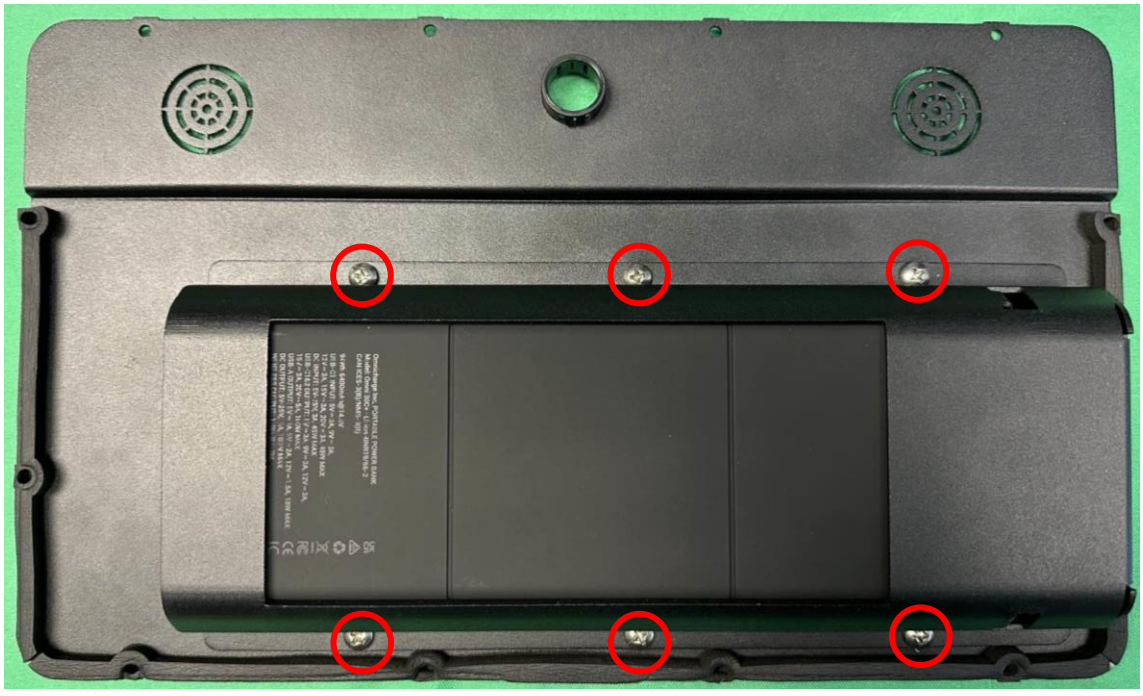

Figure 2: Fasten the battery tray with battery pack to the cover plate using PTA0399-TL.

Router Installation-Boxer G2

Step 1: Mount the router to the bottom plate.

A. If it is not already done, remove the cover plate from the enclosure.
B. Install the SIM Card/s into the Router.
C. Align the router with the holes on the bottom plate. Ensure the router orientation is correct, as shown in the images below.
D. Mount the router using the four PTA0399-TL pan head screws provided in the kit, as shown in Figure 3.
E. **For the XR60 Router, use the provided PTA1166 pan head screws provided in the kit.**
F. Guide the cable bundles back through the grommet in the cover plate.

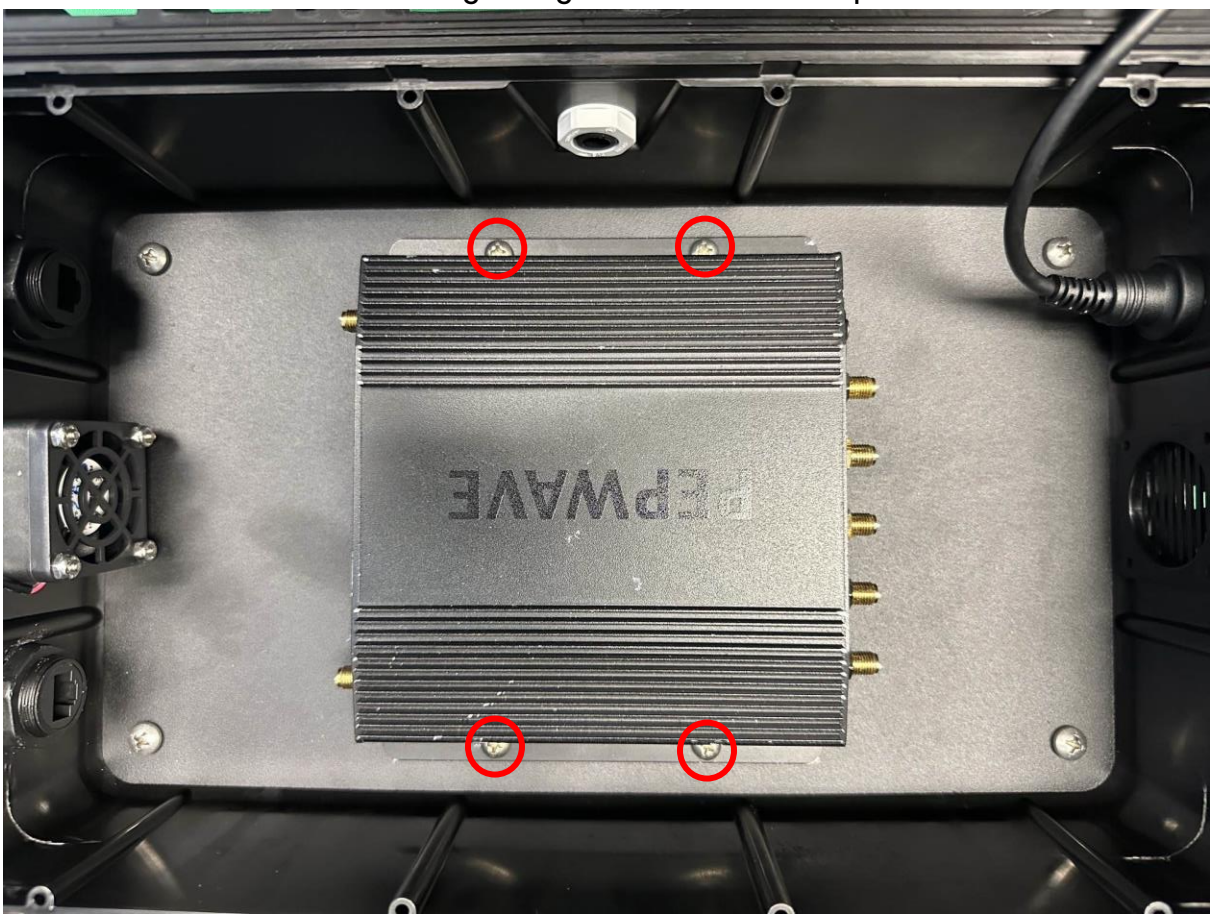

Figure 3: Fasten the router to the bottom plate using PTA0399-TL screws.

Router Installation-Boxer R9

Step 1: Mount the router to the bottom and secure using the router plate.

A. If not already done, remove the cover plate from the enclosure.
B. Install the SIM Card/s into the Router.
C. Place the router on the bottom of the case. Ensure the router orientation is correct, as shown in the images below.
D. Place the PTA1111 Router Plate over the router **with the foam on the bottom/underside**, such that the Router Plate will hold the router down, as shown in Figure 4.
E. Secure the Router Plate on the corners using the Qty. 4: PTA0393 pan head screws provided in the kit, as shown in Figure 5.
F. Secure the Router using the Qty. 4: PTA1121 pan head screws provided in the kit, as shown in Figure 6
G. Guide the cable bundles back through the grommet in the cover plate.

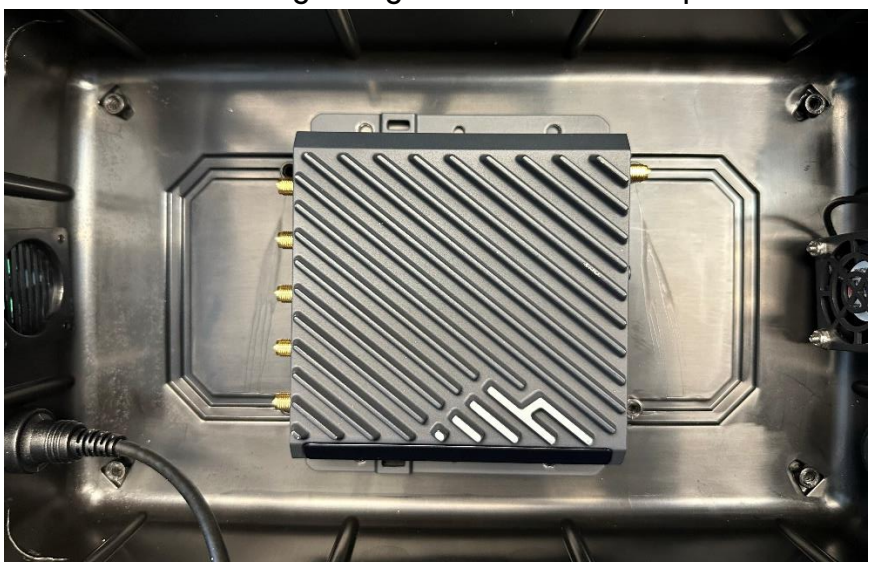

Figure 4: Place the router on the bottom

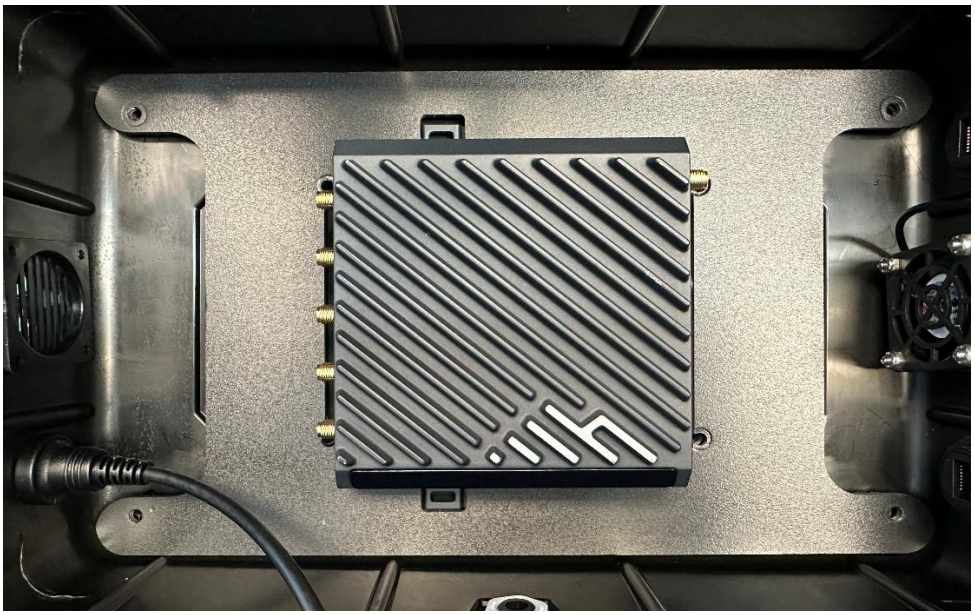

Figure 5: Place the PTA1111 Router Mount Plate with the foam on the underside

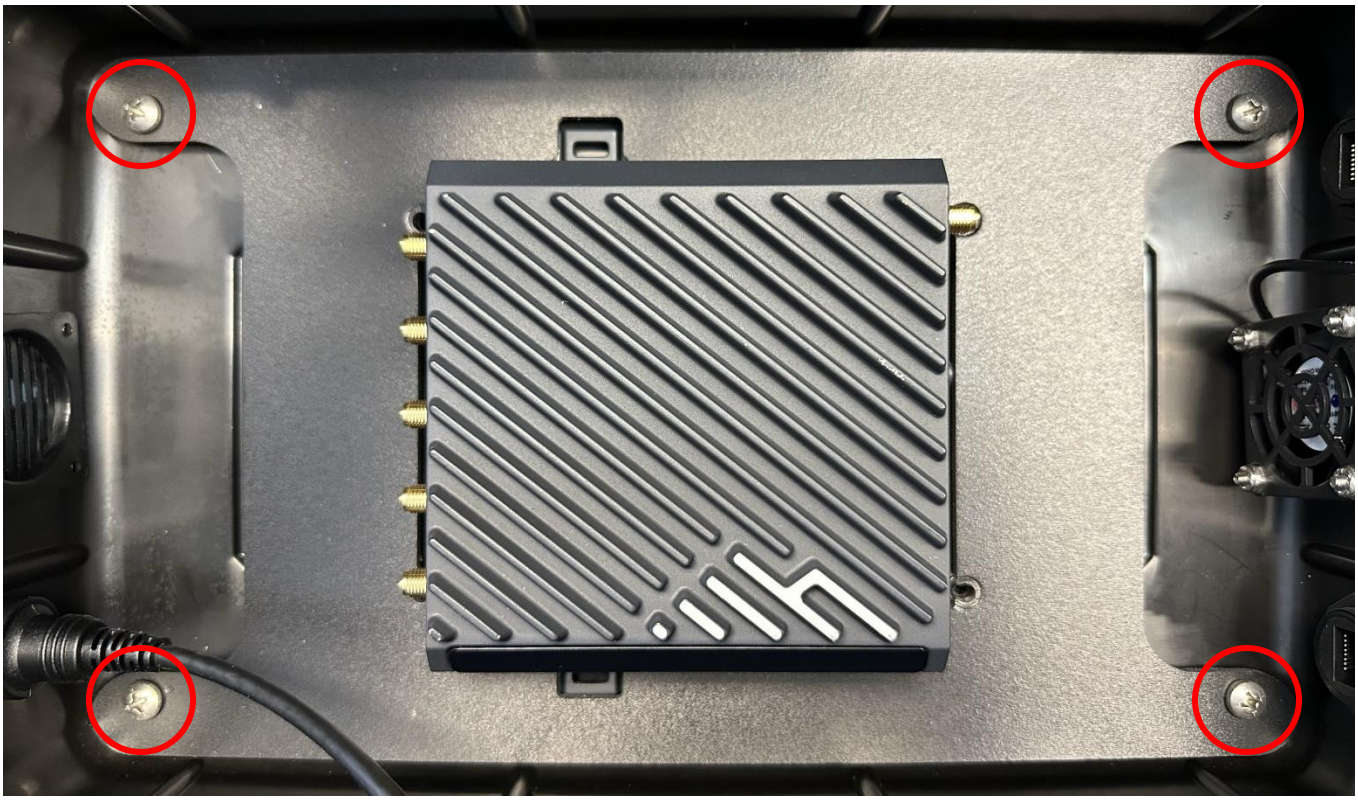

Figure 6: Secure the Router Plate using the PTA0393 Screws

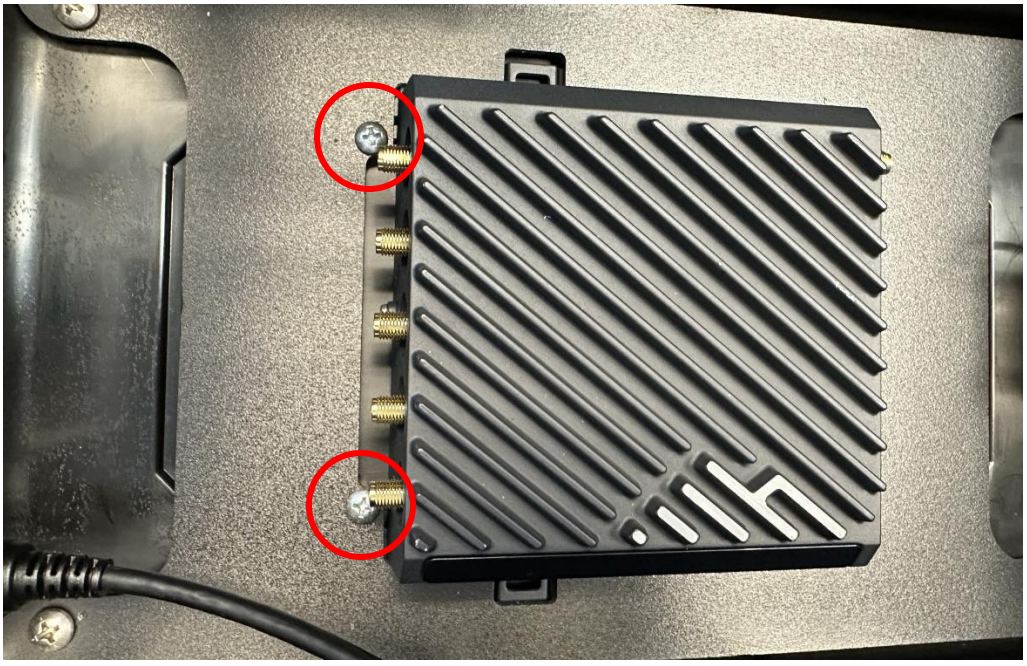

Figure 7: Secure the Router using the PTA1121 Screws

Connection: Boxer G2 & R9

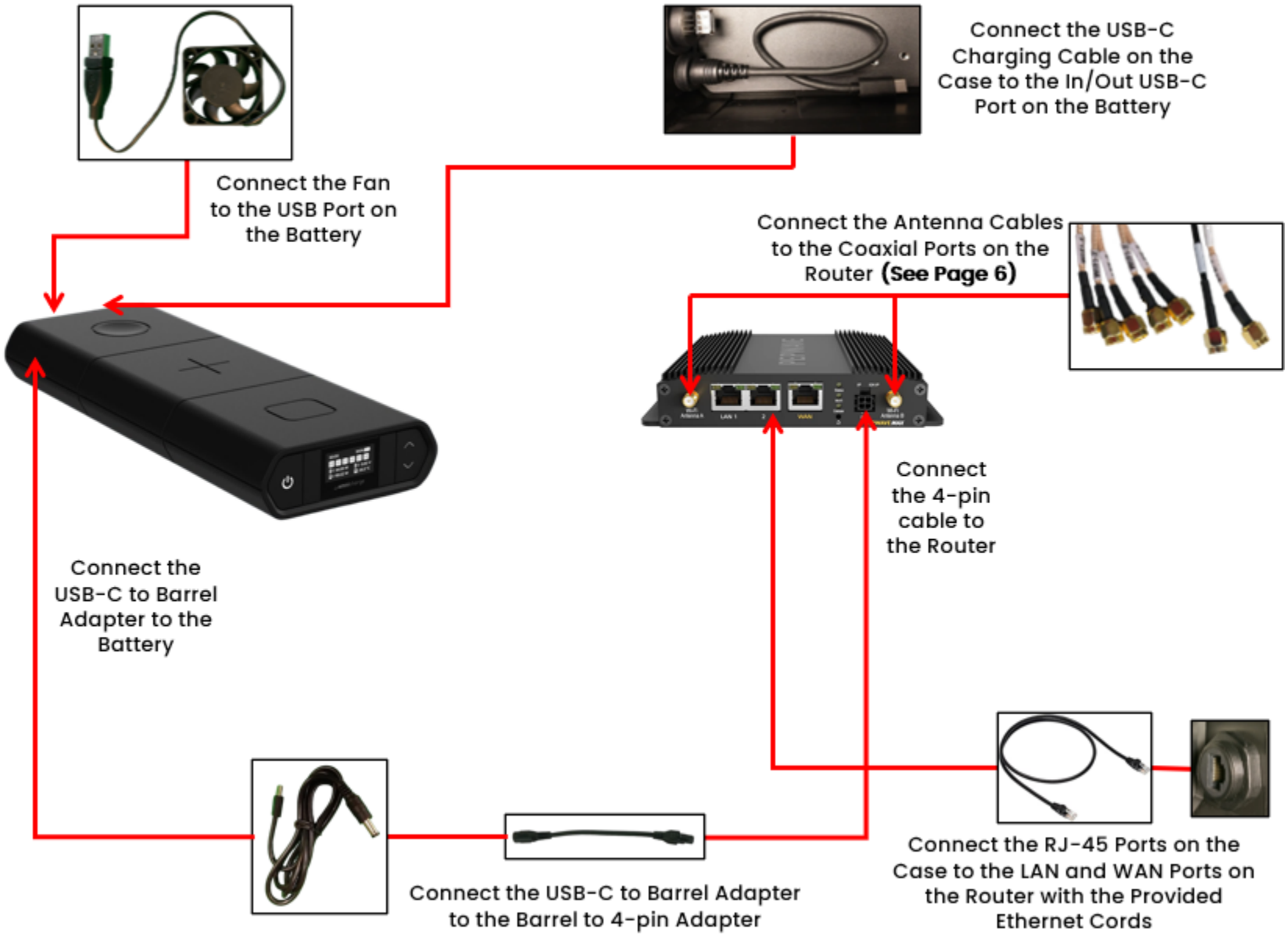

Figure 8: Connection Diagram for Boxer G2

Connection: Boxer G2 & R9

Step 1: Connect the antenna cables to the router.

A. Use canned air/isopropyl alcohol to clean the connectors & ensure there is no dust in the terminals.
B. Connect the antenna cables to the terminals on the router, as shown in the tables/images below.

Boxer G2

Ericsson S700	
Antenna Cable	Router Terminal
CELL 1	1
CELL 2	2
GPS	GNSS
Wi-Fi 1	Wi-Fi 1
Wi-Fi 2	Wi-Fi 2

Peplink MAX BR1 Pro 5G	
Antenna Cable	Router Terminal
CELL 1	CELL 1
CELL 2	CELL 2
CELL 3	CELL 3
CELL 4	CELL 4
GPS	GPS
Wi-Fi 1	Wi-Fi 1
Wi-Fi 2	Wi-Fi 2

Peplink MAX BR1 Mini 5G	
Antenna Cable	Router Terminal
CELL 1	Cellular A
CELL 2	Cellular B
CELL 3	Cellular C
CELL 4	Cellular D

Semtech XR60	
Antenna Cable	Router Terminal
CELL 1	Cellular 1
CELL 2	Cellular 2
CELL 3	Cellular 3
CELL 4	Cellular 4
GPS	GNSS
Wi-Fi 1	Wi-Fi 1
Wi-Fi 2	Wi-Fi 2

Boxer R9

Ericsson R920	
Antenna Cable	Router Terminal
CELL 1	CELL 1 *left*
CELL 2	CELL 2 *right*
GPS	GNSS *middle*
Wi-Fi 1	Wi-Fi 1 *middle left*
Wi-Fi 2	Wi-Fi 2 *middle right*
Bluetooth	BT

Ericsson R980	
Antenna Cable	Router Terminal
CELL 3	CELL 1 *left*
CELL 1	CELL 2 middle *left*
GPS	GNSS middle
CELL 4	CELL 3 *middle right*
CELL 2	CELL 4 *right*
Wi-Fi 1	Wi-Fi 1 *left*
Wi-Fi 2	Wi-Fi 2 *right*

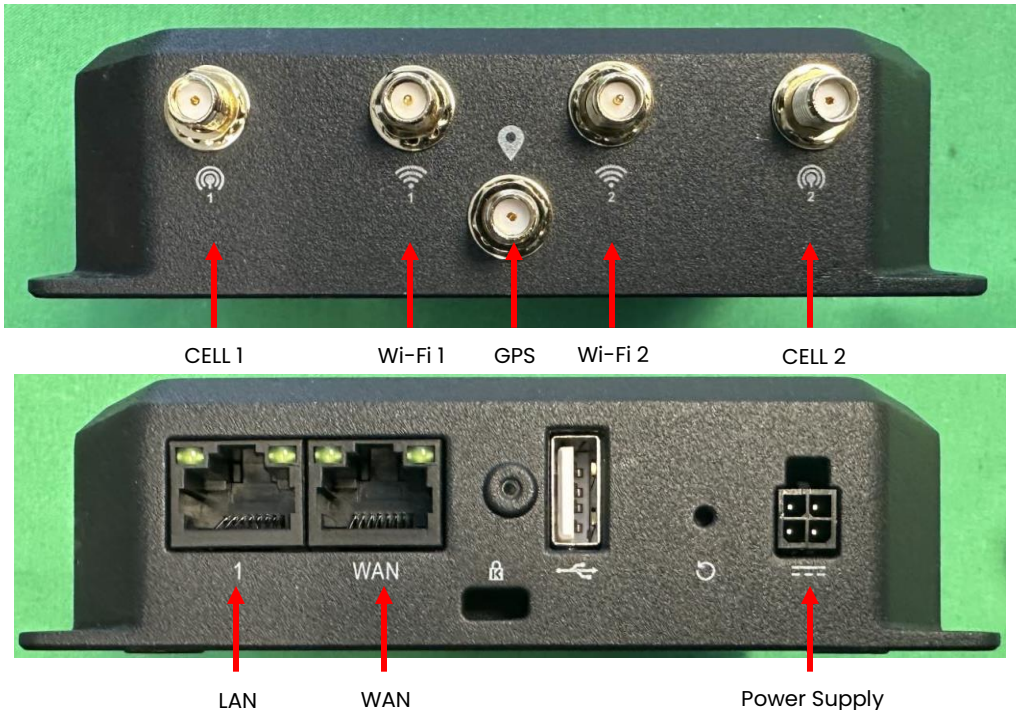

Figure 9: Ericsson S700 Connections

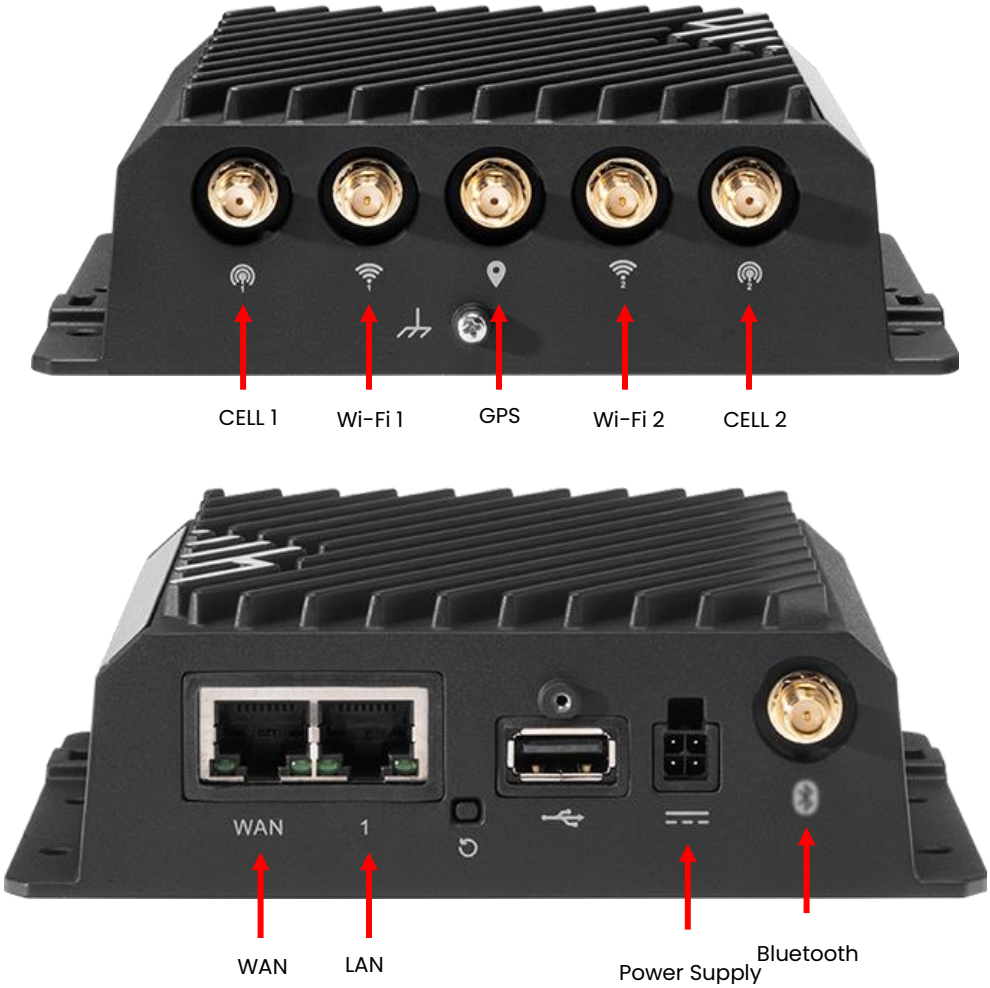

Figure 10: Ericsson R920 Connections

Figure 11: Ericsson R980 Connections

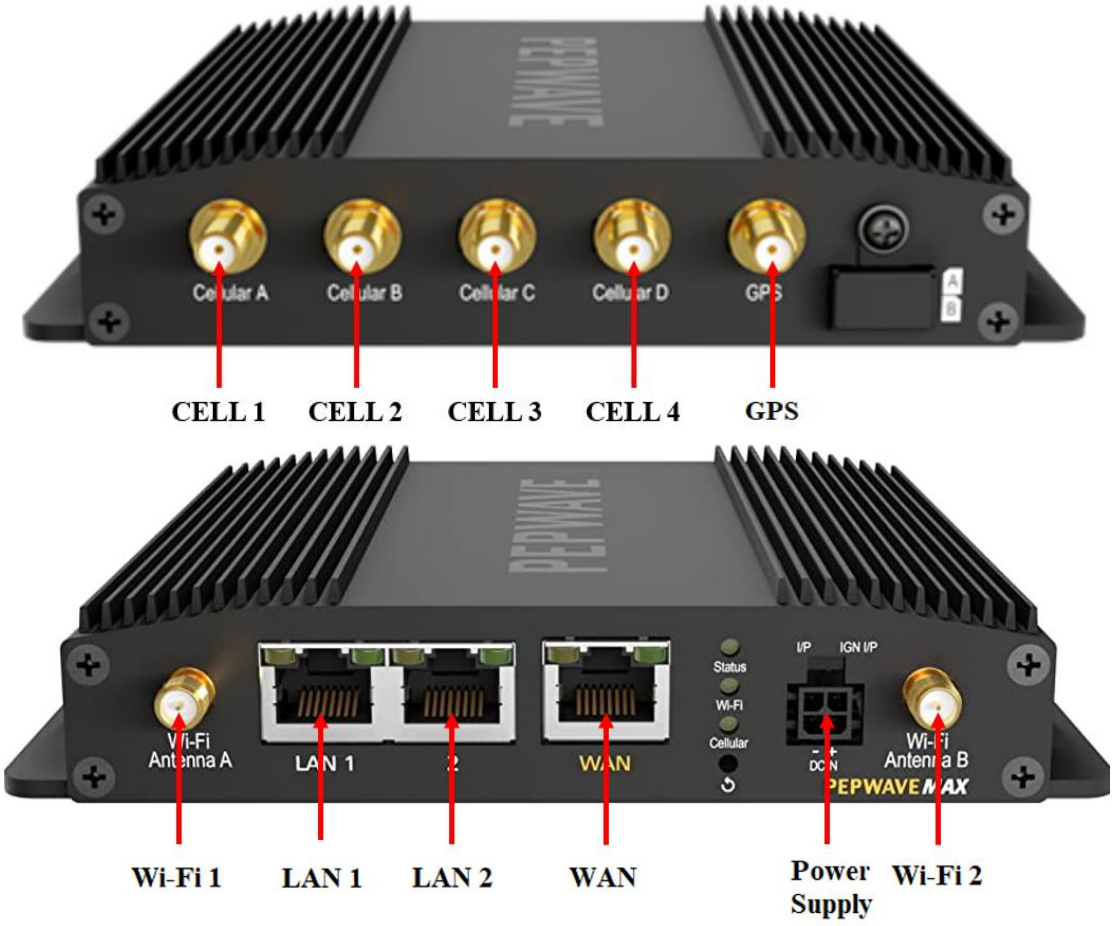

Figure 12: Peplink MAX BR1 Pro 5G Connections

Figure 13: Peplink MAX BR1 Mini 5G Connections

Figure 14: Semtech XR60 Connections

Step 2: Connect the power supply to the router.

A. Connect the power to barrel adapter to the router power supply port and to the USB-C to barrel adapter. Connect the USB-C to barrel adapter to the Power Adapter and plug in the Power Adapter to the Battery, as shown in Figure 16.
B. **For the Semtech XR60, connect the USB-C to USB-C cable to the Battery and to the Router.**

Step 3: Connect the fan to the battery.

A. Plug the USB-A cord from the fan into the USB-A port on the battery, shown in Figure 16.

Step 4: Connect the router to the RJ-45 ports on the case using ethernet cords.

A. Connect the ethernet cords to the LAN ports & WAN port on the router, shown in Figures 9-14.
B. Connect the other ends of the ethernet cords from the router to the RJ-45 ports on the case. Keep track of which cord is connected to the WAN port on the router. Consider connecting the WAN port on the router to the right RJ-45 port and the LAN port on the router to the left RJ-45 port.

Figure 15: Connect the router to the RJ-45 ports on the case using ethernet cords.

Step 5: Connect the battery pack to the USB-C charging port on the case.

A. Connect the USB-C charging port cable from the case to the 65W-In/Out Type-C port on the battery pack, shown in Figure 16.

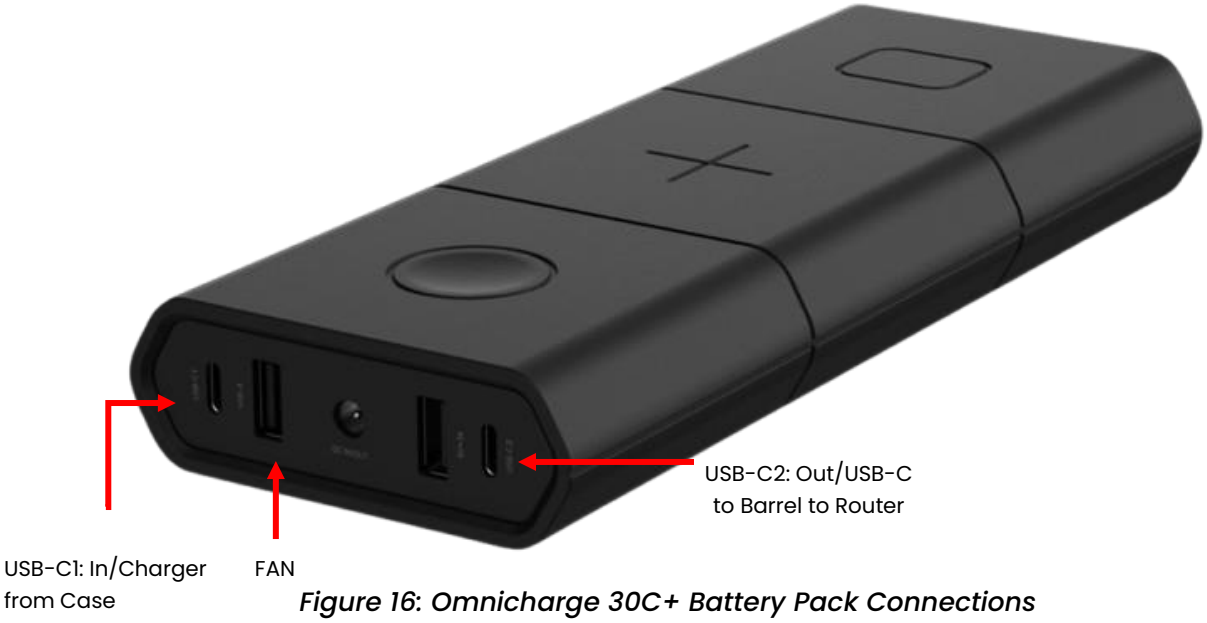

Figure 16: Omnicharge 30C+ Battery Pack Connections

Step 6: Install the Panel Mount Stickers on the outside of the case.

A. Use the PTA0957 Sticker Sheet shown in Figure 17 to label the RJ-45/Ethernet, USB-C, USB-A, and AC Power Panel Mounts, as shown in Figures 18-19.

Note: The stickers/labels may need to be trimmed for the Boxer Case using scissors.

Figure 17: Panel Mount Sticker Sheet

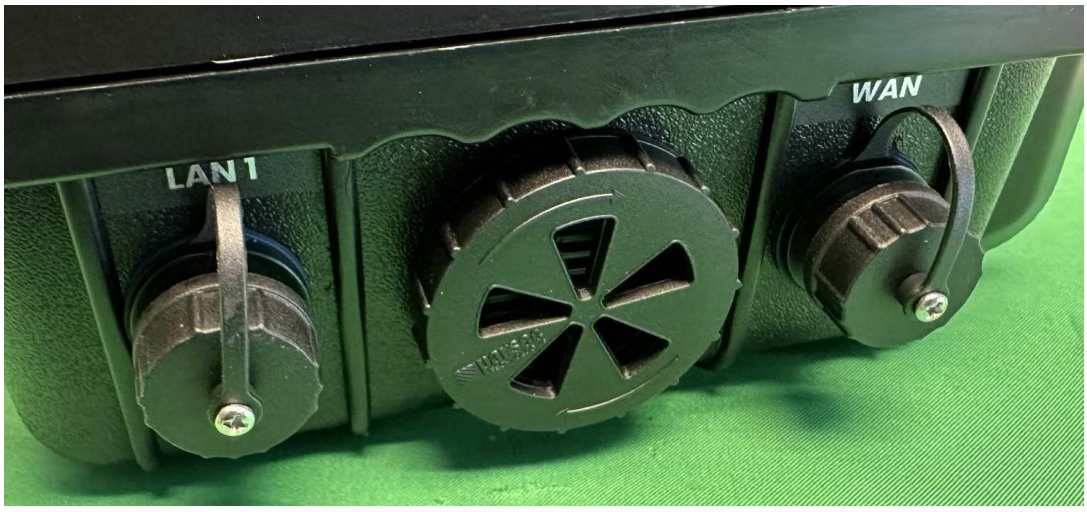

Figure 18: Right Side of the Boxer G2 Case with Stickers installed

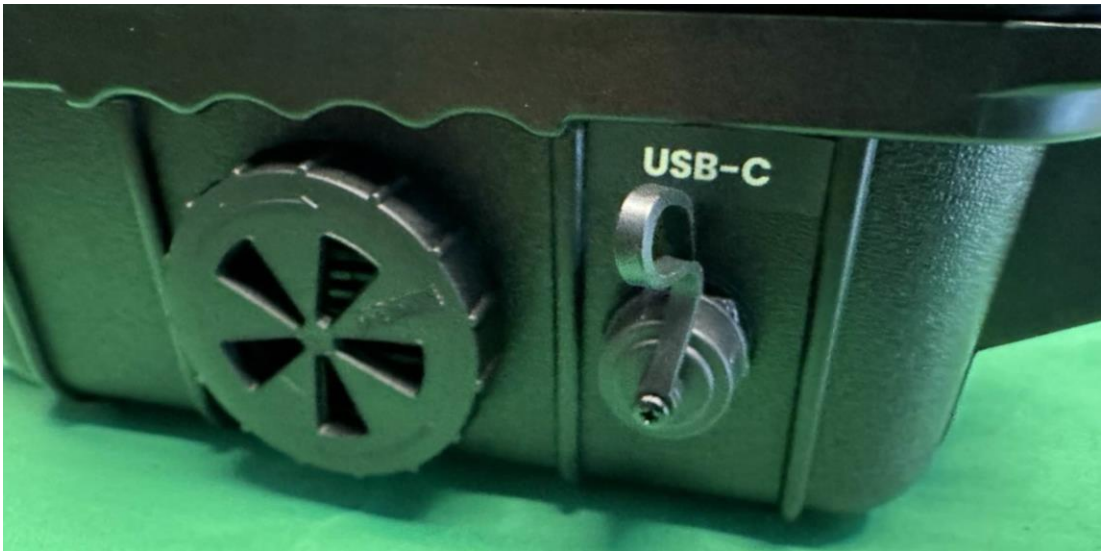

Figure 19: Left Side of the Boxer G2 Case with Stickers installed

Final Assembly: Boxer G2 & R9

Step 1: Make sure all the cables and devices are properly connected.

A. Inspect every cable connection and ensure that no connections are loose.
B. Use cable ties or other wire management to neatly bundle the cables. Pack the cables neatly inside the bottom half of the case. Ensure that the antenna cables are not excessively bent (1/2" minimum bend radius). Ensure that no antenna cables are running across the top of the router.

Figure 20: Fully Connected 5in1 Boxer G2 with Ericsson S700 Router

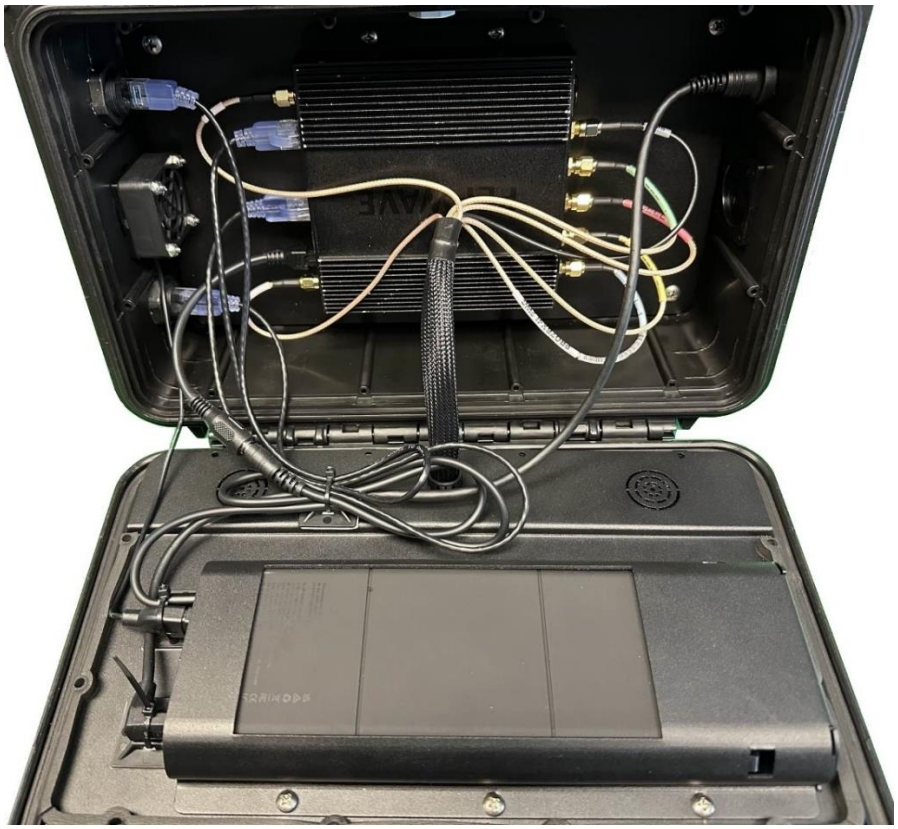

Figure 21: Fully Connected 7in1 Boxer G2 with Peplink MAX BR1 Pro 5G Router

Figure 22: Fully Connected 4in1 Boxer G2 with Peplink MAX BR1 Mini Router

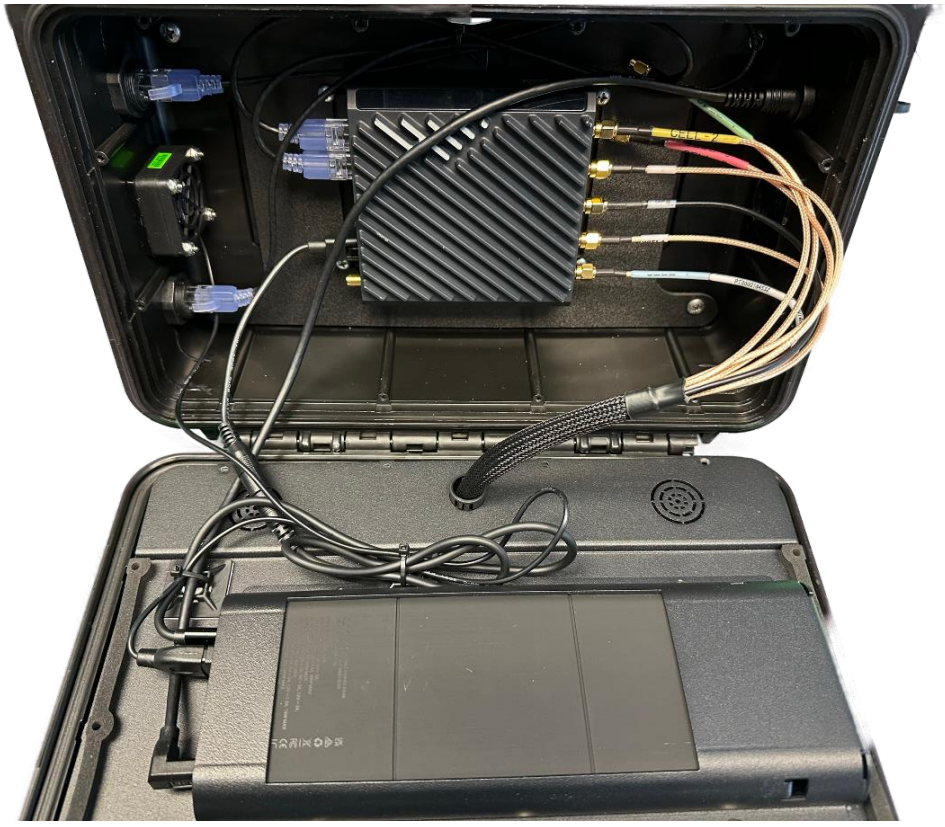

Figure 23: Fully Connected 5in1 Boxer R9 with Ericsson R920 Router

Figure 24: Fully Connected 7in1 Boxer R9 with Ericsson R980 Router

Step 2: Fasten the cover plate to the case.

A. Place the cover plate onto the bottom half of the case. Ensure that no cables are pinched between the cover plate and the case.
B. Fasten the bottom and sides of the cover plate to the case using the eight PTA0099 long screws provided in the kit, as shown in Figure 25.

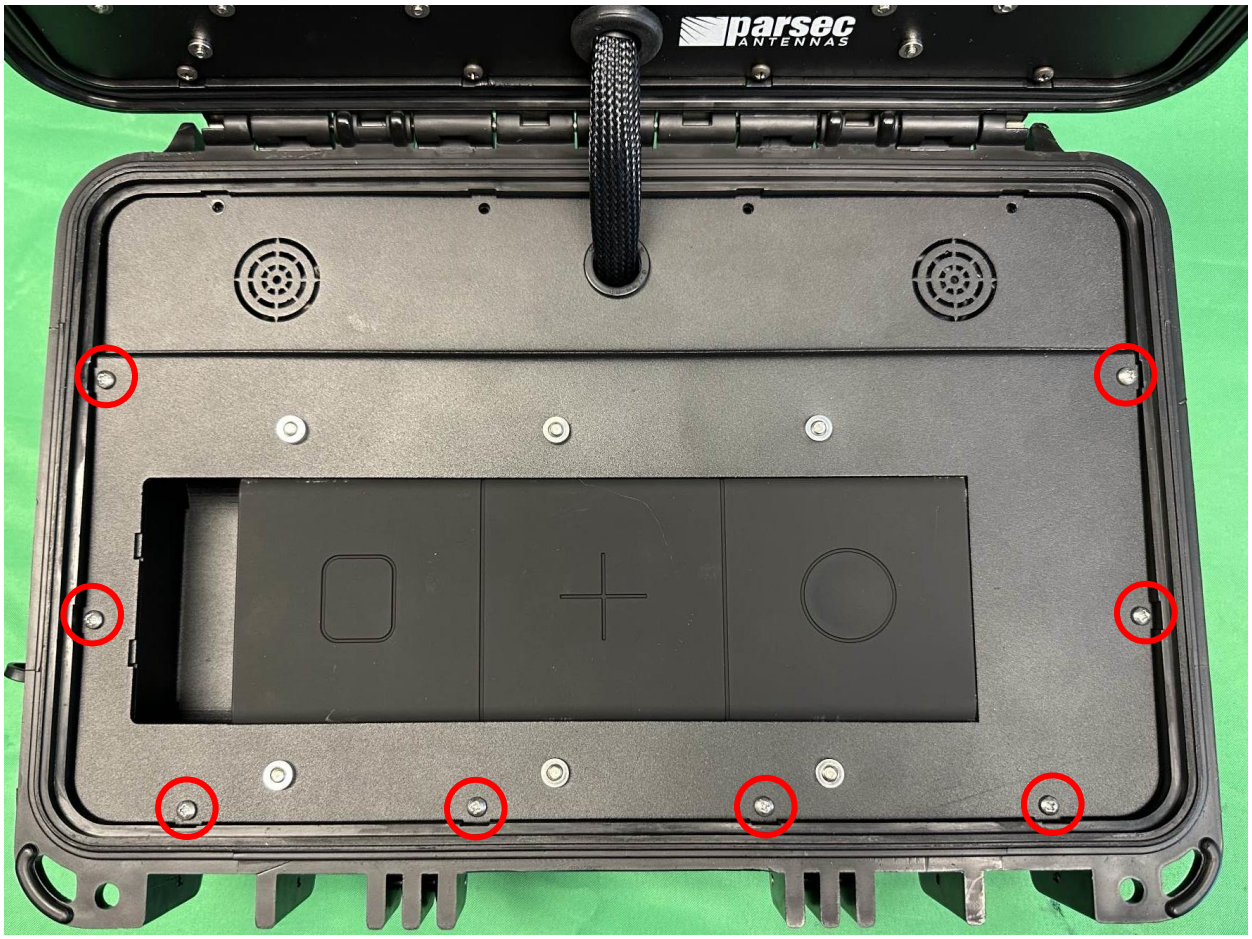

Figure 25: Fasten the cover plate to the case using PTA0099 screws.

C. Fasten the top of the cover plate to the case using the four PTA0071 screws provided in the kit, as shown in Figure 26.

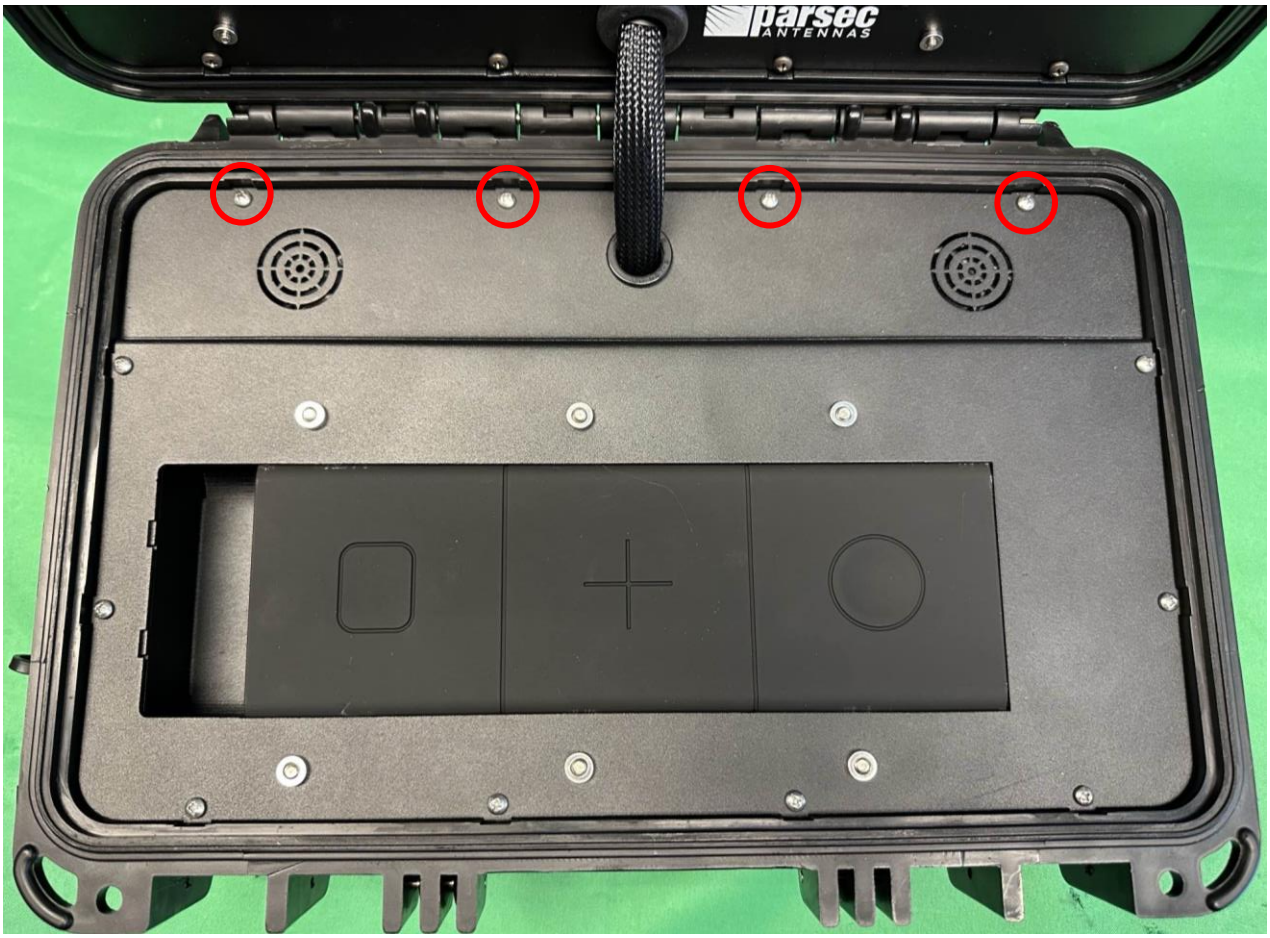

Figure 26: Fasten the cover plate to the case using PTA0071 screws.

Operational Setup

Step 1: Open the fan and vent caps.

A. Before turning the antenna ON, always open the fan and vent caps. The type of cap may vary.
B. Ensure that the antenna is away from any liquids when the caps are open.

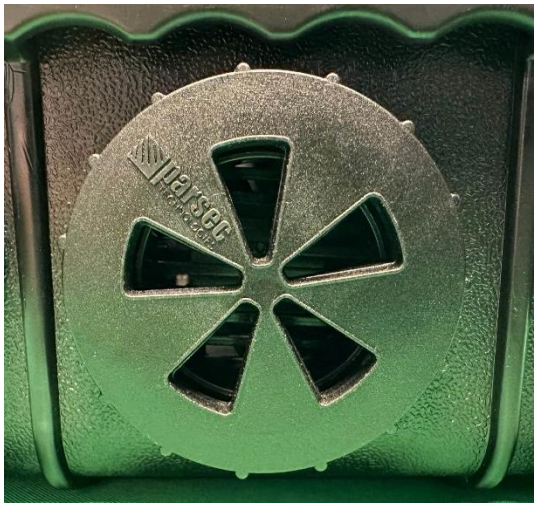

Figure 27: Open the fan and vent caps.

Step 2: Power on the router – Boxer G only.

C. Turn the battery pack ON by pressing and holding the power button for 2 seconds. The display on the battery pack will indicate the battery pack's current battery life (%).
D. Shortly after turning on the battery pack, the fan will start.
E. To charge the battery pack, connect the battery pack charger to the USB-C charging port on the outside of the case.
F. See Page 24 for Battery Operation and Safety Guidelines.

Step 3: Connect the router to a computer.

A. Use an ethernet cable to connect a computer to one of the LAN ports on the router.

Router	Page
Ericsson	Step 4, Page 22
Peplink	Step 5, Page 23

Step 4: Login to Ericsson NetCloud.

A. This step only applies for Ericsson Routers.
B. Open a web browser on the computer and type 192.168.0.1 into the address bar. This will bring up the Ericsson NetCloud login, shown in Figure 28.
C. Login to Ericsson NetCloud. The username is “admin”, and the password is found on the router, shown in Figure 29.

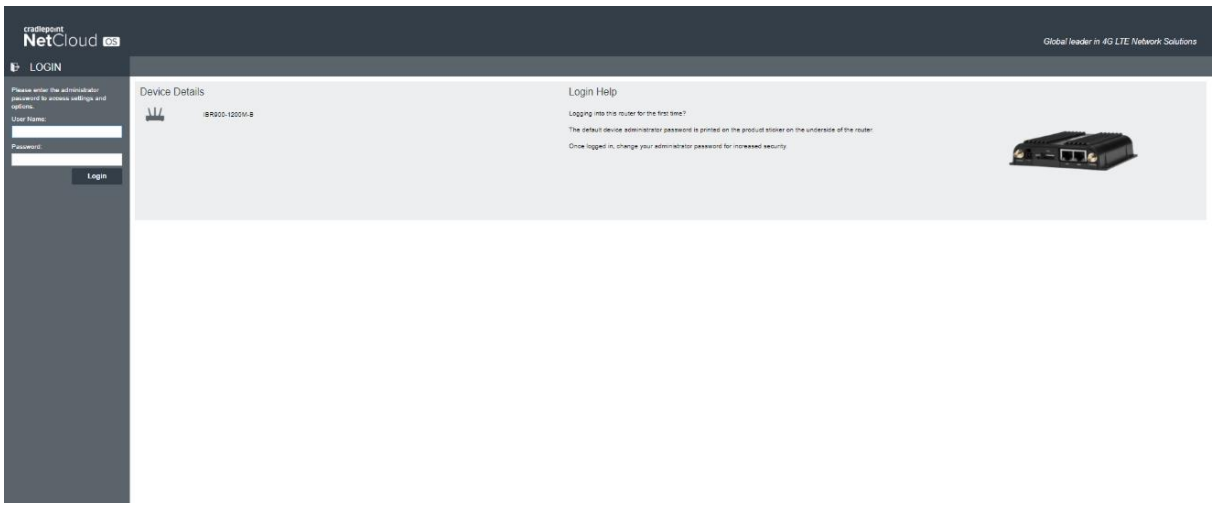

Figure 28: Access Ericsson NetCloud.

Figure 29: Ericsson NetCloud Login Password

Step 5: Login to PEPWAVE.

A. This step only applies for Peplink Routers.
B. Open a web browser on the computer and type 192.168.50.1 into the address bar. This will bring up the PEPWAVE, shown in Figure 30.
C. Login to PEPWAVE. The username is “admin”, and the password is “admin”.

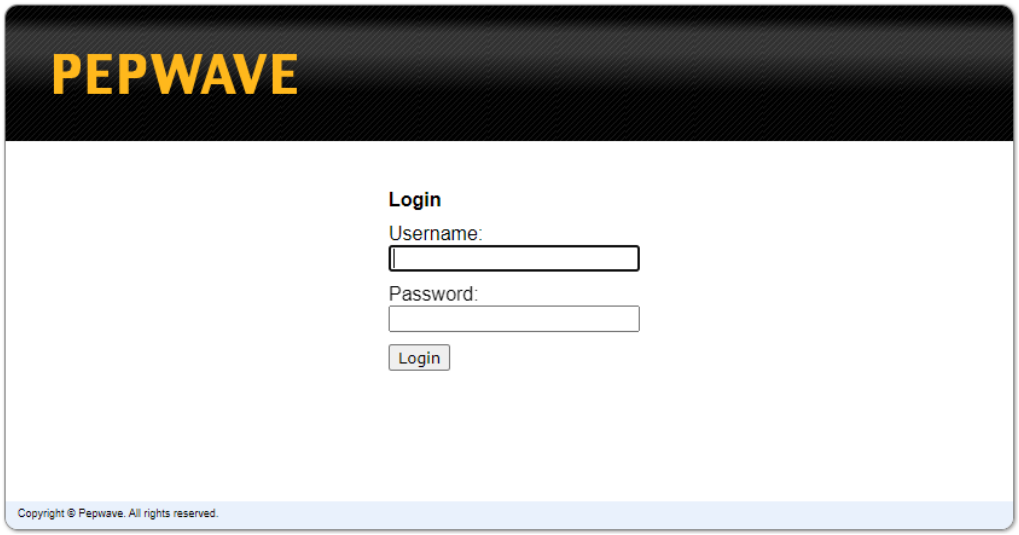

Figure 30: Access PEPWAVE.

Antenna setup is complete!

For best antenna performance, operate the antenna with the lid closed and the case oriented with the lip on top.

Make sure the fan and vent caps are open while using the antenna.

Battery Operation and Safety Guidelines

A. To manually power ON/OFF, press and hold the power button  for 3 seconds. All LED lights/display should turn ON/OFF.
B. Make sure the battery is at least 30% charged before operating. If the battery is not charged, charge the battery using the USB-C Port on the Case.
C. Recharging the battery pack can be done with a Type-C PD Charger with at least 45W of power and up to 65W maximum.
D. While plugged in and charging, the battery pack will allow pass-through charging to continue powering any devices that are plugged in to the battery pack.
E. The battery will automatically shut off after 12 hours, regardless of user input.
F. Warning: if the battery pack exceeds a safe operating temperature due to insufficient ventilation or a high-temperature environment, the unit will automatically shut OFF.
G. Keep out of reach of children.
H. The product may become uncomfortably warm, reaching 104°F (40°C) under extended, high-power usage. While using the product, make sure to keep it away from materials that may be affected by high temperatures.
I. Hold on carefully when inserting or removing a cable. Make sure not to force or bend cables when inserting them into the charging ports.
J. Avoid inserting any foreign objects into the ports.
K. Do not attempt to open, alter, or modify the unit.
L. Do not operate in temperatures under 50°F (10°C) or over 104°F (40°C).
M. Do not expose the product to wet conditions such as water, rain, or snow.
N. Failure to follow these safety guidelines may cause personal injury and/or property damage to the product. It may also void the product warranty.

Disclaimer

CAUTION

To comply with FOC RF Exposure requirements in section 1.1310 of the FCC Rules, antennas used with this device must be installed to provide a separation distance of at least 20 cm from all persons to satisfy RF exposure compliance.

DO NOT:

- Do not operate the transmitter when someone is within 24 inches of the antenna
- Do not install the antenna or mast assembly on a windy day
- Do not install the mast close to power lines as it can cause serious injuries or death

WARNING

This document is for general information only. It cannot be used for a warranty. Performance and other data contained were obtained in internal lab tests under ideal conditions, and performance may vary due to network variables, different network environments and other conditions. Parsec Technologies Inc. will not accept any liability for any damage caused by an antenna due to unknown variables. Parsec Technologies Inc. reserves the right to change, modify, transfer, or otherwise revise this publication without notice, and the most current version of the publication will be applicable.

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